

SEI EXTE I II (CROSS)
EIM.

3/6/2014

QP Code : NP-18729

(3 Hours)

[Total Marks : 80

- N. B. : (1) Question No. 1 is compulsory.
(2) Solve **any three** out of the remaining.
(3) Assume suitable data if necessary.

1. (a) Define transducer and explain the classification of transducer. 5
(b) Explain with diagram principle of operation of frequency selective wave analyzer. 5
(c) Write the applications of Q meter. 5
(d) Describe various types of sweeps used in CRO. 5
2. (a) Explain the principal of operation of dual slope DVM. 10
(b) Explain with neat diagram working principle of LVDT. Give its applications. 10
3. (a) Explain various types of errors in measurement in detail. 10
(b) Explain with example working of successive approximation type ADC. 10
4. (a) Explain in detail "Resistance strain gauges." 10
(b) Compare the temperature transducers RTD, thermistors & thermocouples on the basis of principle, characteristics, ranges & applications. 10
5. (a) Explain performance characteristics of D/A converters. 10
(b) Explain the significance of $3\frac{1}{2}$ and $4\frac{1}{2}$ digit displays. 10
6. (a) Draw & Explain block diagram of digital storage oscilloscope & mention the modes of operation of DSO. 10
(b) Explain electrodynamic type of wattmeter. 10

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